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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,478	06/29/2001	James Hamden	020964-000210US	6536

20350 7590 07/25/2002

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EXAMINER

SUTTON, TIMOTHY J

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 07/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/895,478

Applicant(s)

HARNDEN ET AL.

Examiner

Timothy J Sutton

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The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) 8-12 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,8,9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Species I, claims 1-7 and 13-15, in Paper No. 10 is acknowledged. Examiner also acknowledges the cancellation of claims 8-12.

### ***Claim Objections***

Claim 4 is objected to because of the following informalities: Delete the extra period at the end of the sentence to correct the punctuation error. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by King et al. (U.S. 5,760,468).

Re claim 13, King et al. discloses a small footprint semiconductor device package comprising; a plastic body for enclosing a die having a thickness, the plastic package including a top coupled to a bottom through a plurality of sides (column 1, lines 15-25 and figure 1); a lead including an enclosed portion by the package body and in electrical communication with the die (figure 1, items 45 and 20), an exposed portion of the lead extending from the side of the package body, folding back along the side of the package toward the bottom of the package at a first angle relative to a plane of the

package (figure 1, item 30), and folding toward a center of the bottom of the package to form a linear lead foot inclined at a second angle relative to an underlying PC board (column 1, lines 15-25); and a recess formed in a side of the package body and receiving an end of the lead foot (figure 1).

Re claim 14, King et al. discloses a small footprint semiconductor device package comprising; a plastic body for enclosing a die having a thickness, the plastic package including a top coupled to a bottom through a plurality of sides (column 1, lines 15-25 and figure 1); a lead including an exposed portion of the lead extending from the side of the package body, the exposed portion folding back along the side of the package toward the bottom of the package at a first angle relative to a plane of the package, and folding toward a center of the bottom of the package to form a substantially straight lead foot inclined at a second angle relative to a trace on an underlying PC board, an adhesion of the lead foot to the solder enhanced by the second angle (column 1, lines 15-25).

3. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by JDEC Solid State Product Outline (Low Profile Small Outline J-Lead Package).

4. Re claim 15, State Product Outline discloses a small footprint semiconductor device package comprising; a plastic body for enclosing a die having a thickness, the plastic package including a top coupled to a bottom through a plurality of sides (page 2, Detail B); a lead including an enclosed portion by the package body and in electrical communication with the die (page 2, Detail B), an exposed portion of the lead extending from the side of the package body, folding back along the side of the package toward

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the bottom of the package at a first angle greater than 90 degrees relative to a plane of the package body, and folding toward a center of the bottom of the package to form a linear lead foot (page 2, Detail B), whereupon the lead foot is inclined at a second angle relative to an underlying planar PC board to promote solder wetting (page 2, Detail B).

### ***Allowable Subject Matter***

Claims 1-7 allowed. The prior art (U.S. 5,760,468; U.S. 5,224,021; U.S. 6,297,546; U.S. 5,616,953) teaches a plastic package body for enclosing die; a lead including an enclosed portion by the package body, an exposed portion of the lead extending from the side of the package body, folding back along the side of the package toward the bottom of the package at a first angle, to form an angle of less than 90 degrees, the lead foot being inclined at a second angle relative to an underlying planar PC board to promote solder wetting. However, the prior art of record does not teach or fairly suggest in combination with the other claimed limitations the portion of the lead along the bottom of the package forms an angle of less than 90 degrees.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J Sutton whose telephone number is 703-305-0070. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

tjs

July 18, 2002



OLIK CHAUDHURI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800